

Exhibit B



Consumer Products | Lighting

- Contact & Support



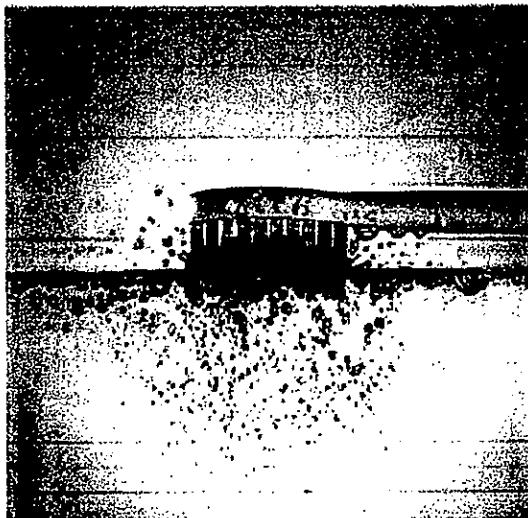
YOU ARE HERE: [Sonicare Home](#) [Why Sonicare?](#)

Why Sonicare?

- [Proven Results](#)
- [Sonic Technology](#)
- [Benefits](#)
- [Opinions](#)
- [No-risk Guarantee](#)
- [Environmental Policy](#)

Oral Care & Your Health

- [Brushes](#)
- [Sanitizers](#)
- [Owners](#)
- [Register Your Sonicare](#)
- [Dental Professionals](#)
- [:: Contact Us](#)
- [:: Glossary](#)



Philips Sonicare is backed by more than 140 abstracts representing clinical and laboratory studies at over 40 universities and research institutions worldwide
[+ Read about the study results](#)

No-Risk Guarantee

Sonicare guarantees results that you can see and feel.
[+ Read more about the guarantee](#)

Overall Health Connection



With the link between oral health and overall health becoming increasingly evident, Sonicare toothbrushes take on new importance.

[+ Read a full list of benefits](#)

Sonic Technology



The effectiveness of Sonicare stems from its advanced technology, which creates dynamic cleaning action.
[+ Understand sonic technology](#)

User Opinions

Facts don't mean a thing if Sonicare doesn't impress the people who use it. Find out what they think.
[+ Read opinions](#)

Sonicare- Why Sonicare?

AEX | EUR 25,85

[Careers](#) | [Philips](#) | [Privacy policy](#) | [Terms of use](#) | [Site Map](#)

©2004-2008 Koninklijke Philips Electronics N.V. All rights reserved.



United States / English

PHILIPS

sense and simplicity

Consumer Products

Lighting

- Contact & Support

YOU ARE HERE: [Sonicare Home](#) **Oral Care & Your Health**[Why Sonicare?](#)

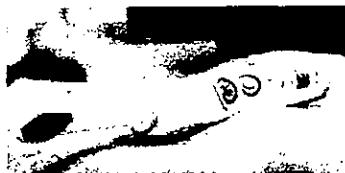
Oral Care & Your Health

[Overall Health Connection](#)[Improving Your Oral Health](#)[Special Conditions](#)[Biofilm](#)[Brushes](#)[Sanitizers](#)[Owners](#)[Register Your Sonicare](#)[Dental Professionals](#)[:: Contact Us](#)[:: Glossary](#)

Twice a Day for a Healthier Body

It makes sense: your oral health is a component of your overall health. This interconnectedness means that poor oral health can undermine your overall health and similarly, certain illnesses and health challenges can impact your teeth and gums.

+ Learn more about the link between oral health and overall health



Oral Health Tips

Little things can make a big difference. Find out about proper brushing and flossing techniques and other simple ways to make a big impact.

+ Read tips

Special Health Conditions

Read about everything from dental stains to diabetes. Find out what these and other special conditions can mean to your dental care.

+ Read about special conditions

[Careers](#) | [Philips](#) | [Privacy policy](#) | [Terms of use](#) | [Site Map](#)

©2004-2008 Koninklijke Philips Electronics N.V. All rights reserved.



United States / English



Consumer Products Lighting

- Contact & Support |

YOU ARE HERE: [Sonicare Home](#) [Oral Care & Your Health](#) **Biofilm**

Why Sonicare?

Oral Care & Your Health

[Overall Health Connection](#)[Improving Your Oral Health](#)[Special Conditions](#)

Biofilm

[Brushes](#)[+ Watch video](#)[Sanitizers](#)

The formation of biofilm

[Owners](#)

Dental plaque consists of a community of bacteria and other microorganisms that reside in a dynamic environment in the oral cavity. This community is known as a biofilm and forms primarily on hard tissue surfaces such as tooth enamel. Biofilm formation is a sequential process and can be divided in stages. The first stage is characterized by the formation of the acquired pellicle, which consists of the deposition of macromolecules of host and bacterial origin onto a tooth surface, many of which serve as adhesins or receptors for bacterial attachment. Pioneer, or early colonizers such as the oral streptococci adhere to the acquired pellicle in clusters.

[Register Your Sonicare](#)[Dental Professionals](#)[:: Contact Us](#)[:: Glossary](#)

During the second stage, as these early colonizers begin to grow and divide, they produce an extracellular matrix that attracts other bacteria such as the mid to late colonizers. As these bacterial colonies grow and the overall plaque biomass increases and matures, the biofilm architecture changes in complexity, becoming more resistant to anti-microbials and more difficult to remove. Nutrients and oxygen are used up by bacteria in the biofilm exterior, where oxygen is more readily available.

Anaerobic bacteria that thrive in the absence of oxygen begin to proliferate in concealed niches in the interior of the biofilms. Many of these bacteria are considered pathogenic and have been implicated in the development of periodontal disease. Plaque biofilm also accumulates in niches such as the interproximal spaces and underneath tooth contact points.

Disrupting plaque biofilm growth before it matures through daily oral hygiene is essential for maintaining a hygienic and healthy oral environment. Clinical and lab studies have demonstrated the superior performance of the Sonicare toothbrush over

manual toothbrushes in plaque reduction. In addition, the Sonicare toothbrush is able to remove significantly more interproximal plaque in hard to reach areas than rotating-oscillating power toothbrushes. Regular use of the Sonicare toothbrush provides sound oral hygiene by assisting in the disruption of oral plaque biofilm, in turn, maintaining oral health and reducing the likelihood of plaque biofilm-related diseases.

Read more about biofilm

- + In vitro evaluation of interproximal biofilm removal with power toothbrushes
- + Effect of the Sonicare FlexCare power toothbrush on fluoride delivery through *Streptococcus mutans* biofilms
- + Comparison of the interproximal plaque removal efficacy of two powered toothbrushes using in vitro oral biofilms

[Careers](#) | [Philips](#) | [Privacy policy](#) | [Terms of use](#) | [Site Map](#)

©2004-2008 Koninklijke Philips Electronics N.V. All rights reserved.



United States / English



Consumer Products | Lighting

- Contact & Support |

**YOU ARE HERE:** [Sonicare Home](#)[Dental Professionals](#)[Clinical Studies](#)[In vitro evaluation of interproximal biofilm removal ...](#)[Why Sonicare?](#)[Oral Care & Your Health](#)[Brushes](#)[Sanitizers](#)[Owners](#)[Register Your Sonicare](#)**Dental Professionals**[Why Dispense Sonicare?](#)[Professional Products](#)**Clinical Studies**[Resources](#)[Sponsorships](#)[:: Contact Us](#)[:: Glossary](#)

In vitro evaluation of interproximal biofilm removal with power toothbrushes

Objective

To compare the removal of interproximal biofilm beyond the reach of the bristles of the Sonicare FlexCare and a rotating-oscillating power toothbrush, using an in vitro model

Methodology

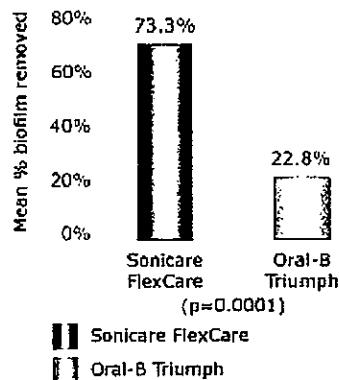
The ability of the Sonicare FlexCare and Oral-B Triumph to remove biofilm without direct bristle contact was evaluated using a dental plaque model of a multispecies oral biofilm grown on hydroxyapatite discs. In a typodont model, the discs with plaque biofilm were located on interproximal sites of molar teeth at a distance of 2-4 mm from the bristles, and exposed to the fluid dynamic activity generated by the activated brushes. An inactivated Sonicare FlexCare was used as a control. Plaque removal efficacy was determined by enumeration of the percentage of viable bacteria removed from the discs as a result of brushing.

Results

The active Sonicare FlexCare toothbrush removed a significantly higher percentage of biofilm bacteria when compared to both the inactive state ($p<0.0001$) and the active Oral-B Triumph toothbrush ($p=0.0001$). Moreover, with 73% plaque biofilm removal, the Sonicare FlexCare removed three times the amount of plaque biofilm when compared to the Oral-B Triumph, with 23% removal.

Conclusion

Sonicare FlexCare removed significantly more biofilm 2-4 mm beyond the reach of the bristles than the Oral-B Triumph.

Removal of biofilm bacteria from HA discs in an interproximal site model

Aspiras M, Elliott N, Nelson R, Hix J, Johnson M, de Jager M. In vitro evaluation of interproximal biofilm removal with power toothbrushes. *Comp Cont Educ Dent* 2007; 28

AEX | EUR 25,89

[Careers](#) | [Philips](#) | [Privacy policy](#) | [Terms of use](#) | [Site Map](#)

©2004-2008 Koninklijke Philips Electronics N.V. All rights reserved.



United States / English



Consumer Products Lighting

- Contact & Support

YOU ARE HERE: [Sonicare Home](#)[Dental Professionals](#)[Clinical Studies](#)**Effect of the Sonicare FlexCare power toothbrush ...**

Why Sonicare?
Oral Care & Your Health
Brushes
Sanitizers
Owners
Register Your Sonicare
Dental Professionals
Why Dispense Sonicare?
Professional Products
Clinical Studies
Resources
Sponsorships

:: Contact Us
:: Glossary

Effect of the Sonicare FlexCare power toothbrush on fluoride delivery through Streptococcus mutans biofilms

Objective

Evaluate the ability of two power toothbrushes, the Sonicare FlexCare and the Oral-B Triumph, to enhance the diffusion of fluoride through a biofilm by fluid dynamic action in vitro

Methodology

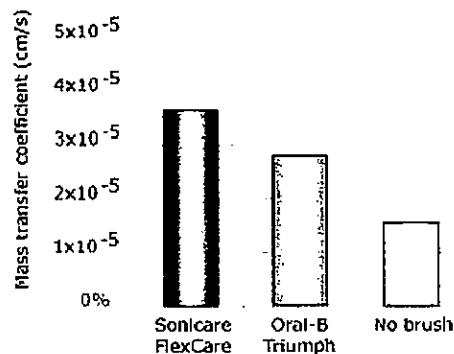
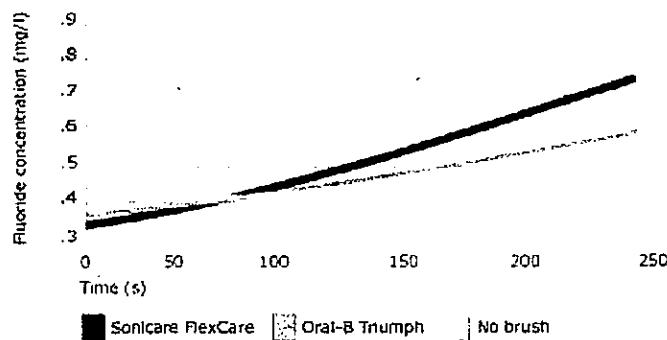
Fluoride diffusion was established by an experimental system that measured the rate of fluoride diffusion through a membrane colonized with a *Streptococcus mutans* biofilm. In a fluid-filled container, the biofilm colonized membrane was contained in a water tight partition that separated the "brushing" chamber from the "measurement" chamber. Brushes were positioned perpendicular to the biofilm at 10 mm distance, then fluoride (1100 ppm NaF) was added to the brushing chamber and the brush activated to enhance fluoride penetration to the measurement chamber through fluid dynamic activity. Penetration of fluoride through the biofilm and membrane was measured with a fluoride electrode over a 4 minute period, and expressed as the "mass transfer coefficient".

Results

The mass transfer coefficient (a measure of the rate of delivery of fluoride through the biofilm-colonized membrane) of fluoride generated by powered brushing was significantly greater ($p<0.05$) than that from passive diffusion alone (no brushing): Sonicare FlexCare increased diffusion by 129% over no brushing. Sonicare FlexCare resulted in a significantly greater ($p<0.05$) mass transfer coefficient than the Oral-B Triumph by 29%.

Conclusion

This study demonstrated that the fluid dynamic action of Sonicare FlexCare enhances the penetration of fluoride through biofilm which may, in turn, help increase the bioavailability of fluoride in residual dental plaque.



*Stoodley P, Nguyen D, Longwell M, Nistico L, von Ohle Ch,
Milanovich N, de Jager M. Effect of the Sonicare FlexCare power
toothbrush on fluoride delivery through Streptococcus mutans
biofilms. Comp Cont Dent Educ 2007;28*

[Careers](#) | [Philips](#) | [Privacy policy](#) | [Terms of use](#) | [Site Map](#)
©2004-2008 Koninklijke Philips Electronics N.V. All rights reserved.

United States / English



Consumer Products Lighting

- Contact & Support |

**YOU ARE HERE:** [Sonicare Home](#) [Dental Professionals](#) [Clinical Studies](#) [Comparison of the interproximal plaque ...](#)[Why Sonicare?](#)[Oral Care & Your Health](#)[Brushes](#)[Sanitizers](#)[Owners](#)[Register Your Sonicare](#)[Dental Professionals](#)[Why Dispense Sonicare?](#)[Professional Products](#)[Clinical Studies](#)[Resources](#)[Sponsorships](#)[:: Contact Us](#)[:: Glossary](#)

Comparison of the interproximal plaque removal efficacy of two powered toothbrushes using in vitro oral biofilms

Objective

To compare, in vitro, the interproximal plaque removal beyond the bristles of two power toothbrushes

Methodology

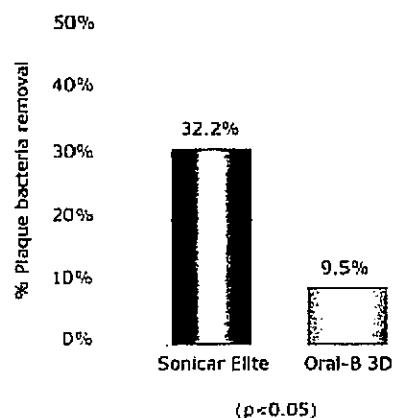
A dental plaque model in which a multispecies biofilm was grown on hydroxyapatite discs was used to evaluate the ability of Sonicare Elite and Oral-B 3D to remove biofilm without bristle contact. The dental plaque model was located interproximally at a distance of approximately 2 mm from the bristles and exposed to the fluid dynamic activity generated by the brushes with the motors either activated or inactivated for 5 seconds.

Results

In the activated state, both brushes removed a significantly higher percentage of plaque biofilm compared to the inactive brushes. The percentage of plaque bacteria removed by Sonicare Elite (32.2%) beyond the bristles was significantly greater than that removed by Oral-B 3D (9.5%), ($p<0.05$).

Conclusion

Sonicare Elite removed significantly more dental plaque biofilm 2–3 mm beyond the reach of the bristles than Oral-B 3D.



Hope CK, Wilson M. Am J Dent 2002;15:7B-11B.

AEX | EUR 25,83

[Careers](#) | [Philips](#) | [Privacy policy](#) | [Terms of use](#) | [Site Map](#)
©2004-2008 Koninklijke Philips Electronics N.V. All rights reserved.



[United States / English](#)